

WHAT IS CLAIMED IS:

1. A liquid crystal display device having variable viewing angles, comprising:
 - a first liquid crystal cell having first and second substrates spaced apart from and facing each other, a pixel electrode on an inner surface of the first substrate, a common electrode on an inner surface of the second substrate, and a first liquid crystal layer interposed between the pixel electrode and the common electrode;
 - a second liquid crystal cell on the first liquid crystal cell, the second liquid crystal cell having third and fourth substrates spaced apart from and facing each other, a first alignment layer on an inner surface of the third substrate, a second alignment layer on an inner surface of the fourth substrate, and a second liquid crystal layer interposed between the first and second alignment layers, wherein the first and second alignment layers are arranged to have holographic patterns; and
 - a switching part for selectively applying electric field to the second liquid crystal layer.
2. The device according to claim 1, wherein the second liquid crystal cell further includes a first electrode between the third substrate and the first alignment layer and a second electrode between the fourth substrate and the second alignment layer.
3. The device according to claim 2, wherein the switching part is connected to the first and second electrodes.
4. The device according to claim 1, wherein the switching part includes a voltage

source and a switch.

5. The device according to claim 1, wherein the third and fourth substrates include one of glass, plastics and resin.

6. The device according to claim 5, wherein the third and fourth substrates are made of a flexible adhesive film.

7. The device according to claim 1, wherein the second liquid crystal layer has one of vertical, horizontal and hybrid modes.

8. The device according to claim 1, further comprising a first polarizer on an outer surface of the first substrate and a second polarizer on an outer surface of the fourth substrate.

9. The device according to claim 1, further comprising a backlight under the first liquid crystal cell.



10. A liquid crystal display device having variable viewing angles, comprising:
a first substrate;
a pixel electrode on a first surface of the first substrate;
a first liquid crystal layer on the pixel electrode;
a common electrode on the first liquid crystal layer;

a second substrate on the common electrode;
a third substrate on the second substrate;
a first alignment layer on the third substrate and arranged to have holographic patterns;
a second liquid crystal layer on the first alignment layer;
a second alignment layer on the second liquid crystal layer and arranged to have holographic patterns;
a fourth substrate on the second alignment layer;
a switching part that selectively applies an electric field to the second liquid crystal layer.

11. A liquid crystal display device having variable viewing angles, comprising:
a first liquid crystal cell having first and second substrates spaced apart from and facing each other, a pixel electrode on an inner surface of the first substrate, a common electrode on an inner surface of the second substrate, and a first liquid crystal layer interposed between the pixel electrode and the common electrode;
a second liquid crystal cell on the first liquid crystal cell, the second liquid crystal cell having third and fourth substrates spaced apart from and facing each other and a second liquid crystal layer interposed between the third and fourth substrates, wherein the second liquid crystal layer includes discotic liquid crystal; and
a switching part that selectively applies an electric field to the second liquid crystal layer.

12. The device according to claim 11, wherein the first liquid crystal layer has a vertical alignment mode, wherein liquid crystal molecules of the first liquid crystal layer are initially arranged with respect to the first and second substrates.

13. The device according to claim 12, wherein the second liquid crystal cell further includes a first electrode between the third substrate and the second liquid crystal layer and a second electrode between the fourth substrate and the second liquid crystal layer.

14. The device according to claim 13, wherein the switching part is connected to the first and second electrodes.

15. The device according to claim 11, further comprising a first polarizer on an outer surface of the first substrate and a second polarizer on an outer surface of the fourth substrate.

16. The device according to claim 11, further comprising a third liquid crystal cell on an outer surface of the first substrate, wherein the third liquid crystal cell includes fifth and sixth substrates spaced apart from and facing each other and a third liquid crystal layer interposed between the fifth and sixth substrates, wherein the third liquid crystal layer includes discotic liquid crystal.

17. The device according to claim 16, wherein the second liquid crystal cell further includes a first electrode between the third substrate and the second liquid crystal

layer and a second electrode between the fourth substrate and the second liquid crystal layer.

18. The device according to claim 17, wherein the switching part is connected to the first and second electrodes.

19. The device according to claim 18, wherein the third liquid crystal cell further includes a third electrode between the fifth substrate and the third liquid crystal layer and a fourth electrode between the sixth substrate and the third liquid crystal layer.

20. The device according to claim 19, wherein the switching part is connected to the third and fourth electrodes.

21. The device according to claim 20, wherein the switching part includes a voltage source and a switch.

22. The device according to claim 16, wherein the third, fourth, fifth and sixth substrates includes one of glass, plastics and resin.

23. The device according to claim 22, wherein the third, fourth, fifth and sixth substrates are made of a flexible adhesive film.

24. The device according to claim 16, wherein the second and third liquid crystal layers have one of vertical, horizontal and hybrid modes.

25. The device according to claim 16, further comprising a first polarizer on an outer surface of the sixth substrate and a second polarizer on an outer surface of the fourth substrate.

26. The device according to claim 25, further comprising a backlight on an outer surface of the first polarizer.